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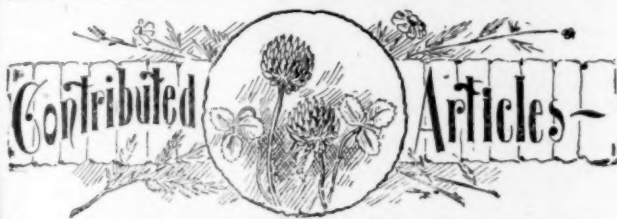
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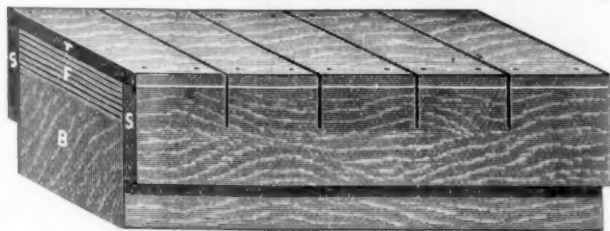


Cutting Foundation for Sections.

BY F. L. THOMPSON.

Recently, at the apiary of Raufuss Bros., I learned the following plan, by which I cut 500 full sheets and as many starters as soon as I got home, and think it the best of any I have heard or read of. If any one has a better plan, trot it out.

A board *r*, of $\frac{3}{8}$ or $\frac{1}{2}$ inch lumber, is nailed on the edges of two similar pieces, *s s*. The resulting space between *s* and *s* should be of such a width that the block *B* just fits it, and the width of this block should be the same as the width of the foundation. The length of the boards and block should not be less than the length of the foundation. Before nailing, lines are drawn across the top board, square with its edges, at intervals equal to the depth of foundation wanted. The figure shows what would be necessary to cut a sheet into five equal parts. These lines are a guide to the proper position for the nails, as shown in the figure.



After nailing, saw-cuts are made where the lines are, through the top board and part way down the side boards. The distance down to be sawed is determined by the number of sheets one finds by trial that he can cut through at once. Care should be taken to make the cuts in the side boards at right angles with the level of the top.

To use, a number of sheets (*r*) are laid on the block *B*, and over them is put the box *s s t*, which might be called a mitre-box. The left hand presses down the box on the foundation, holding it immovable, while the right hand draws a thin, sharp knife, lubricated with honey, or honey and water, quickly through each of the saw-cuts, employing a single stroke for each cut.

One may have, if he wishes, two sets of saw-cuts in the same mitre-box, one set for one depth of sheet, and one for another; or he may make the cuts closer together, for starters.

The advantages are the great rapidity with which the work is done; the cleanness of the cuts, the edges never being torn and ragged; and the squareness of the sheets or starters. Arvada, Colo.



Interesting Experiences in Marketing Honey.

BY MRS. BRITTANIA J. LIVINGSTON.

What I know about marketing honey? "That powder has been shot." It made quite a noise, too. My report in Farm, Stock and Home, of finding the whole honey-trade of a large retail store blocked by a few unsightly sections was quoted quite extensively.

"I can't sell honey," said the merchant plaintively pointing to the article that had ornamented (?) his window for months. There were crushed bees still imbedded in the propolis that freely stuck to the cholera-spotted sections. The honey itself was of fair quality—the untidy wood surrounding it was repelling. After showing a sample of honey put up on scientific principles, I offered to take his honey off his hands at half price, in exchange for mine. He gladly accepted my offer, and is one of my best customers to-day, being especially partial to honey of a fancy grade.

My sales are mostly made to merchants in the little towns within 20 miles. It does not always bring cash, but we never have trouble in exchanging it for family supplies.

Many are very successful in traveling with a sample case, and taking orders to be delivered on a certain date, but I think few lady bee-keepers have time for that. The most of us have many other duties, which compel us to market our honey in the most expeditious manner.

There is none of us so far from market as they who have nothing to sell. With the most of us there must be months of planning, of sewing, canning and home-making, in order to have the time to give to the bees just when it will tell the best, for honey to market.

First, get your honey. Heard something like that before, haven't you? After you get your honey, then get acquainted with the store-keepers, or rather, make them acquainted with your honey. I can't see where any difficulty should arise against working up a fine home trade. At least I have never found any trouble except from one cause. One year I had several hundred pounds of dark honey. It was in fine shape, in white, clean sections, and sold on sight at all the stores. But I had not then kept bees long enough to know anything about a black-strap sort of honey. I never saw anything like

it until large flax fields were grown here. So we call it "flax-honey." If I am wrong, I beg Flax's pardon. It took two years to outgrow the result of putting that poor stuff on the market.

I give this experience to put newcomers on guard, that they may not take this step backward.

Another mistake I made was in sending away a sled load of cases, that were just as they came off the hive. The man who settles my bills, when the honey falls—in return for which I settle many of his when it don't—he offered to take a load to W. city to see what he could do with it. We carefully chose full supers of white, even sections, and both believed that they would carry better in the sleigh if we left them just as the bees had fastened them. One merchant took \$50 worth, half store pay, the balance to be cash, paid as soon as he had sold \$25 worth. The merchant wished them left in the supers, as they "took up less room." So the sections were sold by count after he had examined them carefully.

Afterward, when pay day came, this gentleman claimed that some of the sections were unfinished—"a few had nothing in them." Now, as you cannot afford to quarrel with the the country merchants, or have them dissatisfied in any way with your dealings, never trust a super out of your hands until it is repacked, cleaned, and the honey graded. These are all stumbling-blocks.

If you have your honey well in hand I cannot imagine a pleasanter duty than soliciting orders at retail stores or business houses. No matter what my need may be, from a wheelbarrow to a set of store teeth, I have been able to obtain it with honey, and the other party always acts as if he was getting the favor.

I seldom meet with unpleasantness in my sales. I remember one case where I offended a merchant, and he let his displeasure make itself manifest. I had tried to sell him some fine section honey for 15 cents a pound. I had sold several cases readily at that price in other parts of town. He offered me 10 cents a pound. When I refused, he triumphantly brought around a large platter with an immense piece of honey that had been taken from the largest frame I ever saw—or perhaps broken from a barrel. "There," said he, "I can get all the honey I want as nice as that for 10 cents!"

It was nice looking honey, sealed over with white cappings. While he was talking, customers gathered around, and one man said, "I'll take 25 cents worth of that." I waited, for I wanted to see the comb under the cappings. As I expected, when the light honey run out, the comb was old brood-comb.

"What makes the comb so dark?" said the customer. "Oh, I don't know; honey is 'most always like that," said the salesman.

"Beg pardon," said I, "section-honey is not."

The customer asked me why section-honey did not have black comb. "Because the bees never use it to hatch young bees in," said I. I pointed to the broken comb on the platter, and proved it by bee-bread and pollen in some of the cells. I said, "There have been several generations of bees hatched in that comb. I am very fond of eggs, but I never eat a hen's nest. Neither do I fancy bees' nest."

An old gentleman, who stood near the plate of honey, began to laugh and joke the merchant about his purchase of bees' nest, while I went to make some purchases in another part of the store, but that merchant has not forgiven me yet.

A farm paper, long ago, advised farmers to have a post in a conspicuous place on the road near the house on which to advertise anything they have to sell. We long ago adopted that plan, and "HONEY TO SELL" leads all the rest. This method brings cash, and has but one objection. It has to be taken in over Sunday, as this country is getting to be quite a

famous summer resort, and people "resort" more Sunday than all the rest of the week. And my kind of bees don't gather honey to sell on the Sabbath day.

Centre Chain, Minn.



Under-Consumption of Honey, Not Over-Production.

BY S. B. SMITH.

I was very much interested in the communication on page 163, from G. M. Doolittle, entitled, "The Past and Present of Bee-Keeping." Mr. Doolittle has evidently given an honest opinion as he views the situation or condition of the honey market from his stand-point, but we in the West, having a different stand-point, view things quite differently. Mr. Doolittle's mind seems to be burdened with the over-production theory, that has been so much written upon for the last few years. Let us look at this subject candidly, and with all fairness, and see if over-production is the true cause of the low price of honey. I claim that the word "over-production" is a misnomer. A better word would be "under-consumption." Let us look at some of the other products of the soil and see if I am wrong in that opinion.

A few years ago, about the beginning of what is called the "hard times," our Minnesota wheat dropped in price below the cost of raising it. We were told that the cause of the low price was over-production. At the same time there were not only thousands, but hundreds of thousands, in the United States that were so near starvation that they were fed from soup-houses and bread-counters. A large portion of these destitute people were willing to work for something to eat, but could find no employment. Over-production with hundreds of thousands of people nearly starving—bosh!

Last year, Minnesota had a large crop of wheat, and the price was the lowest that has ever been known in the State. Over-production was again the cry, as the cause of the low price; at the same time the world's crop of wheat was over 100,000,000 bushels short. Was over-production the cause of the low price? Nay, verily.

The price of cotton has declined steadily for some years, but there has been no over-production to cause the depreciation in value. Over-production is not the cause of the low price of the products of the soil, including honey, but the scarcity of money in circulation. The farmer is not paid for anything he produces a sufficient amount to pay the cost of producing it. A majority of tradesmen are paid starvation wages; they do not receive sufficient pay to purchase the necessities of life. Put more money into circulation, so the farmer can receive for his products what it costs to produce them, and pay the laborer a fair compensation for his labor, and this over-production theory will disappear like dew before the sun.

Mr. Doolittle says he commenced bee-keeping 27 years ago, and compares prices then and now. I commenced bee-keeping more than 40 years ago, and sold many hundred pounds of honey in those 6-pound boxes that Mr. D. speaks of, at 25 cents per pound, and now honey put up in much better shape will hardly sell for half of that amount; but over-production is not the cause of the decline of price, but under-consumption.

Early in life I lived in New Hampshire, and I remember the time when a barrel of flour would last a family one year, and now a family of the same number will consume six or eight barrels. If the laboring class were receiving a fair compensation for their labor the consumption of honey would increase in the same ratio. Bread is something a man must have; honey is something he can do without. Honey has not depreciated in value any more than all other products of the soil.

If there is one thing needed in this country more than another it is a greater degree of brotherhood. Each one of us ought to try to elevate our fellowmen, to raise him to a higher standard. We ought to try to better his condition. Let us discard that over-production theory, and fill the American Bee Journal with the sweetness of honey from the honeycomb.

Keeville, Minn.



Perfection in Wintering Bees.

BY C. E. MEAD.

I have written on this subject several times before.

One man in Minnesota took a colony of bees out of a black-oak root three feet below the ground. A wash-out had exposed and killed that portion in the gully which had rotted off, and the bees had entered the root in the gully, and were a month in advance of bees in hives, their condition always above freezing, and they could fly when the weather would admit.

Another man found a colony in a woodchuck or skunk hole. The condition is equally good.

Now, these two colonies had all the advantages of cellar wintering and wintering on the summer stands above freezing, and a flight when the weather permitted.

I induced a friend, Mr. Crego, of Cook county, Illinois, to make a 3-foot bottom-board with strips extending from the front to the rear. The bees have an exit under the cellar-window, and the hive (which was a 4-frame nucleus) is in the cellar. The strips between the hive and the window are covered with a board 14 inches long, so there is a short tunnel for them to travel to the exit. A drawer under the hive showed when they began to breed, also the amount of dead bees. Mr. Crego says that they began to breed in February, as he found brood-cell cappings at that time. Not a teacupful of dead bees were found during the whole winter. On April 15 there were more bees and honey than in the fall; on May 15, bees and honey in 18 Langstroth frames, and so much honey that it ought to have been extracted.

Now, paste this in your hat: *Winter your bees in the cellar or under ground, well packed, with an out-door exit.*

My packed colonies did not use 5 pounds of honey till brood-rearing began, but they have consumed much since then.

HOW DO YOU PREVENT SWARMING?

Rear, or buy, young queens, as many as you wish to increase. With two-story 8 and 10 frame hives, and 4 or 5 cases of sections on top, hives open all around at the bottom, and $\frac{3}{4}$ -inch thick blocks under each corner, and well shaded, they do not often wish to swarm. But if I think they do, I remove the old hive and place an empty hive with frames full of foundation. Into this one-story brood-hive I run all but about two quarts of bees from the two-story old hive, including the old queen. Cut out all queen-cells, and if you have a nucleus with your young queen, in 24 hours take out frames of honey and put her and her bees in, after first breaking the cappings on two or three frames, so the bees will be compelled to fill themselves. Smoke them a little, and place all the section-cases on the new hive. Your swarming is done for the season. Your young queen will fill every empty cell, and an immense amount of young bees will soon fill the hive, and as they have no place to store honey, they will fill two or three cases of sections in a sweet-clover range.

If you wish to increase fast, divide your two-story colony and introduce a young queen to each, giving cases of sections to each. This practice succeeds because of the known fact—a young queen seldom swarms the first year. You gain just 20 days in brood and bees. Ten days is the average time of a queen emerging; ten more before she lays. Now your young laying queen in the other case is laying eggs at the rate of

2,000 per day—a difference of 38,000 bees in favor of division and a laying queen.

Now, if you are running single-story 8 or 10 frame hives, and wish to increase double, take the same plan. If but one-half, put two brood-bodies on top of each other, and put in a young queen. If but one-third increase is wanted, place the three brood-bodies on top of each other. If one-fourth increase, tier up the four brood-bodies.

I clip all of my queens' wings, on one side only, about one-half of the two wings.

GETTING BEES INTO THE SECTIONS EARLY.

To get your bees into the section-cases early, I find nothing like wide frames holding 8 sections $4\frac{1}{4} \times 4\frac{1}{4}$. I take out three brood-frames of honey, and place the wide frames one on each outside next to the hive sides. Then place a frame next to them of capped brood and capped honey. As soon as the sections are nicely started, I put them in a case above, and replace the 16 sections with fresh ones. I get two cases started thus on each hive, and then I give them back three frames of heavy worker-foundation in the center of the hive, in place of the wide frames taken out. All the sections will be filled that you can get the bees started on by basswood bloom, and often more, if you have a sweet clover range.

Chicago, Ill.



The Hive Discussion and Other Matters.

BY W. P. FAYLOR.

A subject of so much importance as the hive, or home of the honey-bee, cannot be too thoroughly investigated. If the flowers from which bees gather the most delicious sweets—Nature's secretion—and a hundred and one other items pertaining to bee-keeping are worthy of recognition, even so is the house in which bees must dwell. Much of the time of summer days, and all the days of winter—yes, and every night of the entire year—the hive is the abiding place of man's favorite insect pet—the honey-bee. We build suitable apartments for other stock—horses, cows and pigs. How for the bee? Shall the hive be constructed altogether for the keeper's special benefit, and the bees have no share or part in the adaptability of its constructed house? If bees reason, I wonder what they think sometimes of their surroundings. Wouldn't be surprised to occasionally find a swarm seeking a new location; but oh, me! when they exchange a nice house for a split and twisted old rotten tree, then where the judgment comes in I'd like to know. But, say, if the bees knew what I know, they would know that their masters do some very foolish things, too, at times.

Early after the honey harvest, a commission merchant of Minneapolis, who had sold my honey to good advantage last year, wrote me that there was not a bit of extracted honey on his market, and thought it would bring 9 cents, and perhaps 10 cents, a pound. So I shipped him six 60-pound cans immediately. After two months I received a check for the fine basswood and white clover honey sent as a sample. Did I get 9 cents a pound? Why, just think of it! He sold it for 4 cents a pound, and after deducting 10 per cent. commission, and the freight charges, sent me the balance. Had I sent a pound can as a sample instead of what I did send, it might be an argument in favor of man reasoning. As I could have gotten 8 cents for it at home, I wonder now where the man's judgment came in. Whether bees reason or not, perhaps one bee-keeper will next time.

I learned recently that my nearest city of note—Dubuque—is practically without any honey—a city of 45,000 inhabitants. A paper sent me from Danville, Ill., recently quoted honey at 17 to 19 cents a pound. Why should we continue to break down the large city market, and let cities of from 20,000 to 40,000 population go empty handed? Perhaps

there will be some improvement on marketing honey some sweet day.

LARGE HIVES.—I am strongly in favor, and will vote for, the large hive, every time. We usually see the motto in bee-books: "Keep all colonies strong." This is a good motto, and to do this I find it necessary to use good-sized hives. I run mostly for extracted honey, and use 10 frames, 14 $\frac{1}{4}$ inches square, making the body of the hive 15 inches, in the form of a cube. I practice the Demaree method in securing honey. By this method I can double the amount over the shallow-frame-tiering-up method. I had my extractor changed so that the frames may hang in the comb basket the same as in the hive. I can handle one large frame much quicker than I can two shallow ones. Then it is always annoying to put frames into the extractor lengthwise, as the ends of the top-bar are apt to catch when we handle them rapidly. Colonies in large hives give me harder and more prolific queens, and longer-lived bees.

A blacksmith near me has a colony of bees in a salt barrel, and the barrel is full from top to bottom. There is a big crack or opening about an inch wide from top to bottom, and yet a colony has wintered in that shell of a thing for four or five years without any protection. A small colony in a shallow hive would perish there the first month of winter.

I have a few colonies in 8-frame Simplicity hives that I run for comb honey. They need a great deal of attention, and must frequently be fed to keep from starving. The middle frames are often found without a drop of honey.

Even where we use shallow frames the 10-frame hive has this one great advantage: There is usually honey left in every frame—if not above, there will be some at the ends. With plenty of honey in the ends of the frames, the bees are kept more nearly like they would be in a square brood-chamber. It is generally believed that bees do not move lengthwise in the winter, but that is a mistake. Bees usually move toward the warmer part of the hive. If the sun shines on one side of the hive in cool or cold weather, how quickly the cluster makes for that side of the hive. I have often had colonies eat out all the honey in one end of the hive, and leave the other end full.

I used to go to a neighbor to recruit my weak bees in 8-frame hives in the spring. His were in hives ranging from 10 to 14 Langstroth frames. He had powerful colonies, but he thought the bees in hives with more than 11 frames did not do as well as those in the 10 and 11-frame hives.

I wonder why some factories do not make a 10-frame hive with frames about 10 $\frac{1}{4}$ inches deep, to accommodate those who want large hives for comb honey. Then, either shorten the frames or enlarge the sections, so that four sections will fill out a section-case without a useless amount of wood to fill up vacant space; or, in other words, the section-case should be the same in length and width as the brood-chamber, doing away with an outer case over the sections. The 4 $\frac{1}{4}$ x4 $\frac{1}{4}$ sections are not large enough to hold a pound of honey. Usually 14 ounces is the minimum weight, yet thousands of them are sold for one-pound sections, and bee-keepers usually speak of them as "one-pound sections." Why not have a one-pound section?

Updegraff, Iowa.



Working for Comb Honey—Putting on Sections.

BY G. M. DOOLITTLE.

If we have been successful in working our bees for brood, so as to obtain a multitude of bees in the right time for the honey harvest, as I have told should be done, would we secure the best results from them, often repeating this in the columns of the different bee-papers, to emphasize the great importance of this matter, by the time this appears before the readers of the American Bee Journal, spring will have given place to

summer, and we are ready for the next step in working for comb honey. This will be putting on the section-boxes, or a part of them, for I contend that it is poor policy to give any colony (unless it is in the case of two prime swarms being hived together), all of the surplus room on the start, as such tends to discourage them, as they do not as yet have a sufficient amount of bees to take possession of so large amount of room.

I generally give surplus room amounting to from 25 to 30 pounds at the start, giving as much more room when the bees have fully taken possession of that first given, and finally the full capacity of the hive (about 90 pounds), when the force of bees increases so as to need it. However, as a rule, the swarming season arrives before all of the sections are put on, when no more sections are added until the old colony has a laying queen.

Always, in managing bees, the apiarist should have an eye on the future as regards his honey harvest, until the harvest arrives, and when it arrives, then bend his every energy for the time which is present.

For instance, my main honey harvest comes from bass-wood, which blooms from the 5th to the 25th of July, so all my operations previous to this time must be in reference to this harvest, or all my efforts will result only in failure. Now the time of the bees swarming has a very important bearing on what I secure as cash out of the apiary. If they swarm too early they defeat my plans, and if too late it is nearly as bad. The thing is to have them all swarm at the right time, which is brought about as nearly as may be, by keeping back the strongest and building up the weakest. This is done by drawing bees and brood from the strong and giving to those which are weaker, until all are brought to a uniform strength at the desired time of swarming.

"But," says one, "when is the proper time for increase?" To which I reply, about 15 to 20 days before the main honey harvest. Why? Because this gives time for the young queens in the old colonies to become fertilized, and not enough time to the new swarm to get so strong as to desire to swarm again. Remember, I am talking exclusively of producing section honey, for the production of extracted honey requires a somewhat different mode of procedure, in my opinion, and I have extracted as high as 566 pounds from a single colony in one season. Nothing can detract more from our crop of comb honey than to have our bees contract the swarming fever during the honey harvest, unless it is, the having them so weak at the time that they are of little or no value.

About the first of June, one year, I was accosted by a neighbor, saying, "Have your bees swarmed yet?" "No," I said, "nor do I expect them to generally for the next two or three weeks."

"Well," said he, "I guess you won't get much from them, for Mr. S. is having lots of swarms."

"All right," said I, "I shall be glad to have Mr. S. secure a good crop of honey."

Well, the result was, during the height of the honey harvest Mr. S. was having lots of swarms, which he was putting back, cutting out queen-cells, etc., in the vain hope to get them to go to work, while only now and then a swarm was issuing in my apiary, with the sections being filled as if by magic.

I have often said the securing of the bees in the right time for the honey harvest counts more toward cash and fun in the apiary than anything else, which is true, but next to this is the managing of those bees, so they will be only bent on storing honey during the honey harvest; for the lack of either gives the apiarist only small return for his labor among the bees.

After doing all in my power to secure all swarms between the 15th to the 25th of June, if the season is an early one,

or from the 25th of June to the 4th of July, should it be late, I frequently get a few from five to eight days earlier, and also a few, that number of days later; but the great bulk come about as I have given.

The date of swarming is put on each hive, thus: "N. S. 6-21" being put on the swarm, and "Sw'd, 6-21" on the old hive, if that is the date. On the evening of the eighth day I listen for a moment or two at the side of the old hive, and if swarming has been done "according to rule," I hear the young queen piping, when I know a young queen has hatched, and an after-swarm will be the result if it is not stopped. If no piping is heard, I do not listen again until the evening of the 13th day, for the next rule is that the colony swarmed upon an egg or small larva being in the queen-cell, which allows the queen to hatch from the 12th to the 16th day after swarming. If no piping is heard by the evening of the 17th day, no swarm need be expected. When it is heard, which will be in nine cases out of ten, on the eighth day, I go early in the morning and take every frame out of the hive, shaking the bees off of each (in front) as I take them out and return them again, so I shall be sure and not miss a queen-cell, but cut all off, for we know that a queen has hatched. This is a sure plan, while I have found by experience that none of the other plans given are sure of the prevention of after-swarms.

The colony is now "boxed" to its full capacity, and if the queen gets to laying all right it will produce a larger amount of comb honey than the swarm will. In 21 days from the time the swarm is hived, young bees will begin to hatch so as to reinforce that colony, so on the 23rd to the 25th day after hiving, I give the full capacity of surplus room to this also, if I think it requires it, which tends to keep them from having a desire to swarm again.

In this way the very best results are secured, the same being what I have practiced successfully for the past 25 years.

Borodino, N. Y.

CONVENTION PROCEEDINGS

Report of the Michigan State Convention.

BY W. Z. HUTCHINSON.

The illness of the President, and of the Secretary's daughter, caused the postponement of the holding of the Michigan State Bee-Keepers' Convention until April 23 and 24, when it met in Lansing. Owing to its being "out of the season," so to speak, for conventions, and the poor honey crops that we have had of late, a large attendance was not expected, but it was thought best to hold a meeting, even if it should be slimly attended, as better years will probably come again, and an organization is needed, and a year or two of good crops will probably bring out a crowd again. As was expected, only what might be called "leading" bee-keepers were present, but a good, social time was enjoyed.

The meeting was called to order by Pres. M. H. Hunt, who then read the following address, on

Bee-Conventions.

A few years back our conventions were well attended—it was no trouble to get out 50 or 100—but now our State meetings scarcely ever exceed a score, and that number is made up of those who have been the life of its existence, the veterans, I might say.

I see those here to-day whom I have met with pleasure year after year, and it seems to me when for some cause they fail to come our conventions must cease. Others may develop enough enthusiasm to keep it alive, but the signs of the times do not point that way. The very excellent periodicals and books published in our interest, and so cheaply, have, I think, lessened the attractions of our meetings, especially to those who seek knowledge for what there is in it for their own individual benefit. It comes much cheaper to read the reports of a convention at home, than to attend it. The average expense of attending would pay the subscriptions to all the bee-journals published in this country.

The several poor seasons in succession have, no doubt, had a bearing on the matter, they having a tendency to incline him to economy, and also to rob him of some of his enthusiasm. A few good seasons, with fair prices, would help us, but should the seasons continue like the few just past, we will have to devise some means to stimulate our brother bee-keepers, or we will not see them at our gatherings.

Conventions are for the advancement of our business and social interests, and help much to place our industry on an equal with other pursuits. It was through them that the World's Fair provisions for a honey show were made, and many premium-lists increased and revised.

The Bee-Keepers' Union owes its origin to them, and it has shown itself worthy of its parentage. Its history is one of glorious achievements from the very commencement of its existence.

Our State association is a necessity. Important matters will be continually coming before it for adjustment. So let us make an individual effort to make our future meetings, each one more interesting than the last, and more numerously attended.

M. H. HUNT.

W. Z. Hutchinson—We need to have an organization, even if it is poorly attended in times of poor seasons. It was through the influence of this organization that bee-culture was added to the list of subjects that are experimented upon at our State Experiment Station. There may be a time when we will need legislation on the subject of bee-keeping, and it can be more readily secured through the influence of a State organization.

Pres. Hunt—One or two good seasons would bring out a crowd again.

R. L. Taylor—I think that is right. If a man gets no honey, he can't afford to attend a convention.

Mr. R. L. Taylor then read a paper entitled,

Lessons in Wintering.

One of the experiments made during the past winter was planned for the purpose of bringing out as prominently as possible the comparative advantages of wintering bees in the cellar and out-of-doors without protection. In addition to that the same experiment was made to serve another purpose. A bee-keeper of long experience advised me that bees would winter well without other protection if placed against the south side of a building where the sun does double duty. I confess that influenced by former experience I had a strong leaning to that opinion myself. Accordingly I selected five colonies on the whole in every respect better than the average except that two were in 8-frame Langstroth hives instead of Heddon hives in which all the others destined to fill the out-door part of the experiment were. These were placed about three feet up from the ground against the south side of my honey-house and barn, which extended beyond them on either side about 25 feet.

These bees flew out at rather frequent intervals during the winter. On two or three occasions when the air was still, and the sun bright, they came out the hives with the thermometer at so low a point in the shade as 36°, apparently without the loss of bees. Sometimes surrounding objects were spotted slightly. Nevertheless, both the colonies in Langstroth hives died about the middle of March, and one of those in Heddon hives early in April, leaving plenty of stores, and showing moderate evidence of dysentery. The two other colonies came through in good condition every way.

This raises the question whether it is true that frequent flights prevent disastrous results from dysentery during the winter months, and also whether it is not worth while to inquire whether hives composed of two shallow sections are not better for the wintering of bees than hives with frames no deeper even than the Langstroth.

The five hives in question were weighed on the 26th of

November, at the time the rest of my bees were placed in the cellar, for the sake of making a comparison of the amount of stores consumed by bees wintered out-of-doors with that consumed by those in the cellar. They were weighed again the 14th of April, when those taken from the cellar were reweighed. The bees left in the hives in which the colonies had perished, were not removed before weighing, and the extra amount of bees lost from them outside the hives was considered to compensate for the deficiency in the amount of stores consumed. The following figures show the result of the weighing and the amount of stores consumed:

Wt. Nov. 26, Apr. 14. Loss in wt.			
63	47%	15 1/4	L. fr's, died in March.
46	29%	16 1/2	L. fr's, died in March.
54 1/2	36%	18	Hed. h'v, died in April.
67	48%	18 1/4	Hed. h'v, alive in April.
74	51%	22 1/4	Hed. h'v, alive in April.
Total consumption 90 1/4			
Average 18 1/20			

Of the colonies weighed when they were put into the cellar Nov. 26, six were selected for this comparison as being fairly equal in strength and prosperity to the five already considered. Their weights and consumption of stores were as follows:

Wt. Nov. 26, Apr. 14. Loss in wt.			
62 1/4	52 1/2	10 1/4	
62 1/4	55	7 1/4	
55 1/2	47 1/4	7 1/4	
58	48 1/4	9 1/4	
39 1/4	33 1/4	6	
49 1/4	37 1/4	12 1/4	
Total consumption 53 1/4			
Average 8.875			

which show a consumption of less than one-half by those wintered in the cellar as compared with those wintered outside, effecting a saving of more than 9 pounds per colony, the exact amount saved being 9.175 on each colony. This with the much greater security afforded would seem a sufficiently strong incentive for the housing of bees during winter.

Six other colonies wintered in the cellar were weighed in like manner, but are not used for comparison because they were below the average in strength, having been treated for foul brood rather late last season, but as they wintered excellently, I give the results here to show how small an amount of honey colonies may require during the winter if well housed. The first two were in two-story Heddon hives, and the others were each in a single story.

Wt. Nov. 26, Apr. 14. Loss in wt.			
37 1/4	29 1/2	7 1/4	
35 1/4	30	5 1/4	
30 1/4	24	6 1/4	
26 1/4	20 1/4	6 1/4	
29 1/4	25	4 1/4	
30 1/4	23 1/4	6 1/4	
Total consumption 37 1/4			
Average 6 1/4			

The bees in my cellar wintered exceptionally well—better, I think, than they ever did before except when they had sugar stores. Out of about 120 I lost three, apparently from dysentery, all the rest except one or two being in excellent heart. They were unusually quiet during the winter, as well as while they were being carried out. I cannot be certain of the exact cause of this, but I surmise that it was the manner in which they were treated.

Contrary to what had been the case before, during the past winter the cistern in the cellar was allowed to contain no water, but the hygrometer kept in the cellar indicated the same degree of moisture as during the preceding winter—about 25 per cent. almost complete saturation, but I do not think now any of these conditions had anything at all to do with the well-being of the bees. This raises the question of the agency of moisture in causing dysentery, but when bees winter almost perfectly in an atmosphere well-nigh surcharged with moisture, it furnishes very satisfactory evidence to me that moisture in itself is not the cause of ill-wintering.

Another point in which the bees received somewhat different treatment, was in the amount of disturbance they were subject to from frequent visits with a light. Previously they had been visited freely without any compunctions, and disturbed by lifting covers, etc., while during the past winter visits were as infrequent and as brief as the requirements of

my experiments permitted. I have always been persuaded that such visits and consequent disturbances were not specially harmful, and I am not as yet disturbed in that opinion by this last experience.

Still another point is that in former winters I had clung to a habit which took its rise when my cellar was overcharged with bees, which had a tendency to cause the temperature to raise to a higher point than was to my liking, on account of which I fell into the practice at such times of opening a door or window of a night to let the temperature of the cellar run down, and as this seemed to have a quieting effect, I naturally thought it was a good one, but on considering the debilitated state in which many of the weaker colonies came out of winter quarters, I began to question it, and during the past winter no outside door or window was opened from the time the last of the bees were put into the cellar till the day the first were taken out, and the inner door only when it was absolutely necessary for the purposes already suggested. It was the result of this, as I am now inclined to think, that the weaker colonies—and a few were decidedly weak—wintered as well as the stronger ones.

Of course it must not be forgotten that, in an effort to attain success in the wintering of bees in a cellar, scarcely less important than sound stores is the temperature of the cellar, and the weaker the colonies, and the moister the atmosphere, the higher is the temperature required to be to insure success. During the last winter, in my cellar, the temperature was maintained almost uniformly at 45°, running down a degree or two during the coldest periods. For a cellar so damp as that, I now think 45° best. For a very dry one, 40° might do very well.

R. L. TAYLOR.

L. A. Aspinwall—Isn't it possible that the exhalations from the bees, when there were so many, had something to do with the wintering of the bees? Too many cellars are simply "holes in the ground," from which there is no exit for the carbonic acid gas.

Mr. Taylor—The bottom of my cellar is but little below the general level. If the door should be opened, the gas could run out.

W. Z. Hutchinson—How about the law of the diffusion of gases?

Mr. Aspinwall—Carbonic acid gas is heavy, and will sink to the bottom of a cellar and lie there as water lies at the bottom of a depression in the ground. If there is some opening where it can run out, and the winds drive it about, it becomes mixed with the air, and in that way there is a diffusion.

W. Z. Hutchinson—I have often noticed that the bees near the cellar bottom did not winter so well as those that were near the top of the cellar, but I supposed that it was the matter of temperature rather than that of an accumulation of gas. Those at the top are warmer.

Mr. Taylor—I am done with out-door wintering, except as a matter of experiment. I have better success in out-door wintering with hives of thin walls than I have with chaff hives. The latter become damp.

W. Z. Hutchinson—I have seen bees wintered out-of-doors with the most perfect success. There are two ladies up near Farwell, of whom I have several times bought bees, and they winter their bees out-of-doors with the most perfect success. They pack the hives thickly in chaff, and on top, over the brood-nest, is an opening several inches square, cut through the cover of the packing box, and covered with wire-cloth to keep out mice. Over all is a roof to keep out the storms. They are particular to keep the entrances from becoming blocked up with snow. It seems more pleasant to winter bees out-of-doors. There are some disagreeable features connected with in-door wintering, but, like Mr. Taylor, I have been more successful in wintering bees in the cellar than I have out-of-doors.

Mr. Taylor—To what unpleasant features do you refer?

W. Z. Hutchinson—Well, it isn't very pleasant work carrying them into the cellar and out again.

Mr. Taylor—I think I have gotten rid of most of the unpleasant features.

W. Z. Hutchinson—Please tell us about it.

Mr. Taylor—The matter of temperature has much to do with the ease with which bees can be carried into or out of a cellar. If the weather is too cool, it is just as bad as though it were too hot. What might be termed a cool, cloudy day is best. I have the hives pried loose from the bottom-boards, and a block put under the edge of each hive to hold it up. This is done sometime previous, so that the bees may be quiet at the time they are carried down. In the cellar the hives are stacked up in single piles. That is, one hive is first set down, then another on top of that, then another, etc. Then, in carrying them out, only the ones in one pile are disturbed at the same time. Sticks are placed on top of the first hive, then the next hive set on these sticks, then sticks put on top of the next hive, and the next hive on top of these sticks. In carrying them out a hive is set down upon a bottom-board, and if the bees show any disposition to leave the hive, the entrance is closed until the hive is placed upon its summer stand. There is no necessity of rushing all of the bees out at one time, and in that exhausting the strength of the one who does the work. A few may be carried out in the morning, then a few in the evening. The next suitable day, a few more may be carried out, and this can be continued until they are all out.

Mr. Aspinwall—With me the loss in weight in wintering bees has been greater in the cellar than in the open air. In open air wintering there is always a chance for the bees to fly if there comes a suitable day.

(Concluded next week.)

Questions AND Answers

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Candied Comb Honey—Keeping Honey from Candying.

1. I have some comb honey that is candied, and unfit for table use. How can I best prepare it for fall feeding? If by heating, how shall I separate the wax from the honey?

2. How can I keep honey from candyng? H. M. S.

ANSWERS.—1. Melt it *very slowly*. One way is to set it on the reservoir of a cook-stove where it can never reach the boiling-point. Another way is to set it in a pan of water on the back of the stove where the water won't boil, having pieces of shingle, or something of the kind, in the dish of water under the vessel of honey. No matter if it takes several days to melt it. When cold, remove the cake of wax, and there's your honey. Of course, it will candy again if left long enough.

2. Hardly in any way to be recommended. You can heat it to 160°, and seal it while hot in fruit-jars. But if you heat it too much, you'll spoil it.

Wet Inside the Hive—Comb-Leveler.

1. I have had bees only three years, have read up considerable, made a great many mistakes, and *know* that I have yet to learn a great deal, so I ask for information. I must say that some of your answers, and a great deal of information from the American Bee Journal, have saved me many a dollar. About two months ago we had several weeks of very fine weather, so that the bees reared brood at a fine rate; for the last month it has been raining most of the time. I now have a hive full of bees, but no brood or honey, so I am feeding several colonies. I have 7 colonies in dovetailed hives with flat covers, and I find part of them very wet inside, so bad

that I can scrape the paint off the bottom-boards with a knife. Have you any way to manage to avoid this? I have one hive shellac-varnished, and the others painted inside. If I can afford it, I will shellac all I make hereafter, and will surely shellac the bottom-boards, and by keeping the hives well slanted to the front, I know that the water will not soak into the wood, but will run out at the entrance. I don't allow any water to get in from the outside, or the bees would have all been drowned long ago. I use a movable shingle roof to each hive.

2. I have seen mention made of a comb-leveler made by Mr. B. Taylor. Can you describe it to me, or inform me the easiest way to get it?

LEARNER.

Oregon.

ANSWERS.—1. The matter of having trouble from having too much wet from the outside working into a hive is something that has not come within my own experience. At least not from working through the wood, although I've had trouble with cracks in covers, and have found nothing that would so effectually keep wet from coming through cracks as a covering of tin. I wonder if it isn't possible that at least some of the wet that troubled you came from the inside instead of the outside. After I commenced using tin covers I sometimes found the inside of the cover soaked, and great drops standing over it, the moisture coming from the bees themselves. The only remedy I know of for this is to have a fair slant to the hive, and to have a good-sized entrance.

2. It is an arrangement of sheet iron, kept hot by a lamp standing under it, and a section placed upon it is melted down to a certain point determined by a stop. The work is done with great rapidity and with great perfection. Having used it, I can heartily recommend it.

Transferring Bees.

Last winter I bought two colonies of bees in box-hives. They are eight miles from my place, so naturally swarming is out of the question. Now, I would like to do one of two ways, viz:

1st. Drive the bees out, *a la* Heddon, on frames with narrow starters, with sections on top. Set the boxes alongside, and put the entrances at right angles to the new hives. Turn gradually the old boxes around until the entrances are close to the front of the new hives, and in about a week or ten days remove both old boxes to a new stand, and set one on top of the other. Twenty-one days from the driving transfer to a new hive.

2nd. Drive the bees in box No. 1 on narrow starters, with sections on top, and set new hive on the stand of No. 1. Remove the good combs to a second new hive, and fill up with foundation. Move box No. 2 to a new stand; put the second new hive filled with combs and foundation on the stand of No. 2, and furnish a queen for this hive.

I could set box No. 2 alongside of this last new hive, but in such a way that the entrance is at right angles to the other, turning the box around gradually until the entrances of both the box and No. 2 are together, then in about a week remove the box to a new stand. After two or three weeks I could transfer the combs and all to a new hive.

Which do you think is best? Or is there a better plan? I could work all for comb honey, or one for comb and the other for extracting. I will not drive till about the first of June.

H. A.

Oregon.

ANSWER.—The first thing I should want to do would be to get those bees just about eight miles nearer home. For by the plans laid out, a number of visits will be needed, making much travel. However, there may be special reasons why it is not desirable, and perhaps not possible to move them now, and it may be that other business frequently takes you where the bees are. Either way you mention can be carried out, only it is not a very good plan to transfer a colony late in June with the combs full of brood and honey. Better leave the last job of transferring till next year in fruit-bloom. But you can avoid either way by adopting the first plan, which, on the whole, will probably be most satisfactory.

The Names and Addresses of all your bee-friends, who are not now taking the Bee Journal, are wanted at this office. Send them in, please, when sample copies will be mailed to them. Then you can secure their subscriptions, and earn some of the premiums we have offered. The next few months will be just the time to easily get new subscribers. Try it earnestly, at least.

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EDITORIAL COMMENT

Advantage of a Long Tongue.—The value of the bee lies in its tongue, and, as the usefulness of this member as a honey extractor is supposed to vary with its length, efforts are being made in France to develop an improved, or long-tongued, race of bees. The tongue is measured by two methods, says one of our exchanges. M. Charton uses a box having a cover of wire-netting and a slightly inclined bottom; the bees which reach through the netting and suck sweets from the bottom farthest down the incline being those with the longest tongues. The apparatus of M. Legros is a vessel of sweetened liquid, with a perforated tin-plate cover, which can be adjusted at any desired height above the liquid. Ordinary bees are found to have tongues with a length of 6.5 millimeters (about one-fourth of an inch), while those of the black French bees reach 9.2 millimeters, and those of the best American bees have a maximum length of 8.73 millimeters. The colonies whose bees extract syrup from the greatest depths are preserved as stock for reproduction.

Apis Dorsata.—Both Gleanings and the Review have recently spoken out quite plainly in regard to the importation of *Apis dorsata*. Editor Root says this:

In view of what some of the correspondents of the American Bee Journal have said, a sample of which we give in this issue, and in view of the further fact that *Apis dorsata* would be of but little or no use to us for the purpose of fertilizing the flora of this country, Gleanings is opposed to any action on the part of the general government for importing these bees to our country. It would involve considerable expense, and very little if any good would result, even if the expedition were successful. Moreover, if money is to be used by the general government for the benefit of bee-keeping, it can be much more wisely expended in other ways—for instance, the United States Experiment Station, under the wing of the Department of Agriculture; or a national honey and bee show at Washington would be more acceptable to the mass of beekeepers.

Editor Hutchinson has this paragraph in the May number of his paper:

Apis dorsata and its importation has received some attention of late in the bee-journals. A York State Association, seconded by Prof. Cook, is in favor of asking the government to try to import these bees. E. T. Abbott, Dr. C. C. Miller,

and H. D. Cutting, in the American Bee Journal, oppose their importation. It is evident that there is a little prejudice in the matter—some think Mr. Benton is after the job, and they don't want him to get it, as he has not proved himself to be a true man. The only real, fair opposition against the scheme is that we don't know but their importation may be a mistake. The Australians wanted the rabbits, but they don't want them now. We wanted the English sparrows, but don't want them now, neither do we want any more Cyprian bees. The suggestion that they be thoroughly tested in their own country before being brought here, strikes me as reasonable.

We agree fully with Editor Root, that if the general government has any money to spend for bee-keeping, it can do so much more profitably in the directions indicated in the closing part of his editorial paragraph quoted.

California Bee-Keepers.—Rambler says in Gleanings that there are over 1,000 bee-keepers in Southern California alone. We have seen the estimate somewhere that there are 3,000 bee-keepers in the whole of that great State. If such is the case, we think we are safe in saying that not one in three of them read bee-papers. We often wonder why they, as well as bee-keepers elsewhere, do not more generally read the bee-papers. Surely, any bee-keeper can well afford one dollar a year—about 8 cents a month—for bee-literature, no matter where he lives.

Again, we are often surprised that what is sometimes called the "Bee-Keepers' Paradise"—the wonderful South—takes so little interest in reading literature devoted to bee-culture. But the very portion of our country where one would naturally expect to find the largest proportion of bee-keepers, it seems right there are the fewest readers of bee-literature. Hence it is that scarcely can a bee-paper be successfully published in that region. They fail to give sufficient support. But with the continual migration of Northern people southward, in time that defect will be remedied, and the South will become, as it should be, the greatest bee-country in the world, and its apiarists will then read, as do their more northern friends.

"California 'Strained' Honey."—Accompanying two samples of what was sold for "honey," came this letter from Mr. J. H. Wing, of Syracuse, Kans., dated May 14:

MR. EDITOR:—I send you samples of "California strained honey" that is sold and laid down in our market at a price somewhat less than will buy a good article of pure honey on the Pacific Coast by the carload.

Two parties or firms in St. Joseph, Mo., appear to be engaged in this business.

I take it the article is not honey at all, but glucose brightened with chloride of zinc.

The dark sample is several years old, and grows darker with age.

The light-colored sample is fresh, and is warranted "not to granulate," and to keep several months.

I have sent samples to several persons for the purpose of getting their opinion of the stuff, and assistance in getting suitable laws passed for the protection of producers and consumers of honey from competition of such counterfeits.

Would you mind giving it a write-up in the "Old Reliable," and telling us what you think of it?

I think I will also send samples to some of my friends who are producers and dealers in honey, and reside in California and Colorado, that they may see what is selling on the reputation they have so successfully established for first-class honey.

How long will it take to ruin our markets for extracted honey if consumers are supplied with stuff like the samples I send you?

JAMES H. WING.

The samples were received and simply sampled—that was quite enough. We doubt very much if they ever were within ten miles of a bee-hive. Surely, bees would not be guilty of putting up such vile stuff.

The dark sample looks more like ordinary cough medicine, and tastes much worse. The light colored sample tastes

pretty much as if it had been "strained" through a dish-cloth—judging from its odor, also.

No, sir, Mr. Wing, we don't "mind" giving our opinion of such things in a very plain manner. But what's the good of "opinions" when you have no law to help stop the evil? It does about as much good as a church convention "resoluting" against the diabolical saloon, and the members failing to vote against it at every opportunity. What is first needed in both cases—against adulteration and saloons—are *prohibitive laws*. Then full enforcement. With such procedure, we'll guarantee that both evils would be "cured." And we are ready to help secure both the laws and their proper enforcement.

We believe right here is a fine opportunity for the National Bee-Keepers' Union to get in some good work for honest honey-producers. It should work with State and National law-making bodies looking toward the passing of the necessary laws against adulteration. Once having the laws, then it could turn its attention and money along the line of their strict enforcement. Every bee-keeper would aid in this work. It is something practical. It *must* come before bee-keepers can hope to make the success of honey-production that they are fairly entitled to.

Let our watch-word be, *Down with honey-adulteration!* And every bee-keeper help in the fight to put the tamperers with pure honey where they belong—behind iron bars!

Bee-Keeping and Fruit-Raising.—Mr. R. Touchton delivered an address on this subject before the California Bee-Keepers' convention held at Los Angeles, in which he said:

Yes, I think the honey-bee is a friend to fruit-growers. Some trees and plants require the agency of bees or other insects to fertilize and make them fruitful. In fact, I believe that they are a benefit to all flowering trees and plants. I have been informed by good authority that the cherry orchards of this State became unfruitful after the bees were removed from the vicinity, and that they became fruitful again after the bees were brought back for that purpose, and I have read of similar instances East. Where the bees were removed out of a fruit-growing belt, the trees became unfruitful, and the orchardists were glad to get the bees back again. There are some varieties of strawberries that are not self-fertilizing, and require the agency of either the wind or bees to transmit the pollen from those that are self-fertilizing. If they were depending solely on the wind, a great deal of the pollen would waste its sweetness on the desert air.

The foot-hills that skirt the valleys of Southern California from Santa Barbara to San Diego—and I presume in many other portions of the State also (but I am only acquainted with Southern California)—should be the homes of bee-keepers and fruit-raisers, living together in harmony. Or, what would be still better, every such fruit-raiser should be a bee-keeper, and *vice versa*. There are a great many practical bee-keepers who would like to engage in the business if they could live in society and have the ordinary home comforts, such as they could have along the foot-hills of our valleys, but if they have to go back into the mountains and away from society, they beg to be excused. I have had numerous letters from Eastern bee-keepers inquiring about the business and a chance for investing in it. But when I wrote them the true facts in regard to the business as carried on here now, they were satisfied to stay at home. Therefore, in the face of the existing facts, it is time to come to the front and defend their interests as against the encroachment and opposition to the fruit-raiser, and adjust the differences existing between them if we hope to maintain our position as the banner honey State of the Union.

"Extra Pages" in one some of the bee-papers that come to our desk have been such a regular thing lately that we wonder that particular attention is called to it. Especially when it occurs that the "extra pages" are caused by putting in a whole lot that either has no bearing on bee-keeping or else has the appearance of simply filling up.

It would be very easy to fill up extra pages in the Bee

Journal with good matter, but we believe we give in each number all that can be profitably read. Bee-papers are not to be read like story-papers—simply to pass away the time; but each article should be read slowly and digested, else the time would be wasted, at least for some readers.

Then there has been some talk about what color of cover shall be used on some of the bee-papers. Happily the Bee Journal is not troubled with that question. Its "cover" seldom changes, so its friends are able to recognize it at all times. But tinted covers are hardly expected on *weekly* publications. They are an expensive luxury, any way.

Natural Stores Preferred.

For several years I have kept a record of sugar-fed colonies, and I have been slowly forced to the conclusion that, under present conditions, natural stores are the best. Occasionally, when honey is of poor quality, sugar stores are the safest; but such years have lately been the rare exception, and our best results, on the average, come from hives heavy with natural stores in the fall. With small brood-chambers a larger proportion of the honey will be stored for market; but where will be the gain if sugar has to be returned for winter? Even if we grant that it can be fed so early as to promote a sufficient brood-rearing to maintain the normal strength of the colony, the extra amount consumed will more than counterbalance the difference in price per pound. The hundreds of tons of honey thus yearly thrown upon the market by the exchange of sugar for honey must make some difference in present prices—quite likely more than any of us surmise.—P. H. ELWOOD, in *Gleanings*.

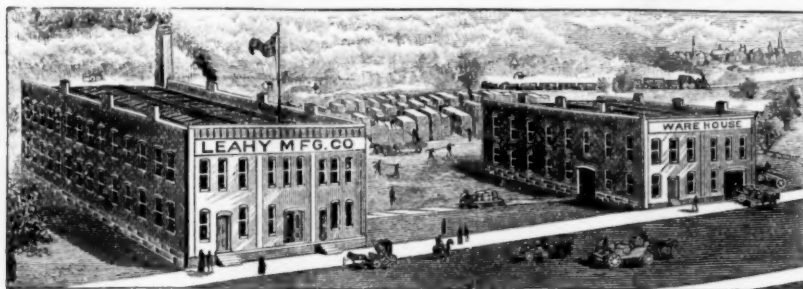
The Mating of Queens.

QUESTION.—Do queens of second swarms "mate" before or after they lead out a swarm? I see one of our "bee-lights" says that "perhaps they may mate before going out with the swarm."

ANSWER.—If any bee-keeper of any prominence puts forth the claim that any queen leading out any after-swarm may mate the drone, or become fertile, before she leads the swarms, it is something I should not expect, and shows that he or she cannot have looked into the matter very thoroughly. I have made swarming and queen-rearing a study for the past 20 years, spending hours, days and weeks upon it; and if any queen was ever fertilized, or even flew out to meet the drone while there were other young queens in the cells, it is something I have never noticed, and something that all of my experiments go to prove never happens. All know that after-swarming comes only from a plurality of queens in the hive, and these queens are always those which have never been out of hive at all, except as they may have gone out with an after-swarm, and been returned by the apiarist. As a rule, during after-swarming, all young queens which would naturally emerge from the cells, except the first hatched, are kept in the cells by a guard of bees which feed them through a small opening in the cell, made by the young queen trying to bite the cover off; and these queens are constantly quawking because they are kept prisoners; and the one which has her liberty is piping back in her enraged condition—enraged because the bees keep her from destroying these quawking inmates of the cells.

While such a state of things as this is kept up in the hive, no queen has any desire to mate, and no after-swarming is ever conducted except under just such a state of affairs. In one or two instances, where after-swarms had been kept back for several days by unfavorable weather, and where only one queen went with the after-swarm, I have had every evidence to believe that said queens were fertilized while out with the swarm, as I saw them entering with the drone-organs attached to them, and they were laying two days afterward. But the rule is, that all queens accompanying after-swarms wait about their wedding-trip until they are established in their new home, when, in two to four days after hiving, on some pleasant afternoon, the bees will come out for a playspell, and the queen be seen to leave the hive to mate.—G. M. DOOLITTLE, in *Gleanings*.

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for \$1.10.



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READ THIS—Mr. Keyes says: The 100 pounds of Extra-Tin Foundation you sent us is superior to anything he ever saw; and I think the same. R. L. TUCKER, Wewahatchka, Fla.

Dear Sirs:—The Sections came duly to hand. Indeed, they are very nice. Yes, sir; they are as good as the best. CHARLES H. THIES, Steelville, Illinois.

Leahy Mfg. Co.:—I have received the bill of goods. I must say they are the choicest lot of Hive-Stuff I have ever received from any place. I admire the smoothness of your work, and your close selection of lumber. Yours very truly, O. K. OLMSTEAD, Orleans, Nebr.

Dear Sirs:—The Sections arrived in due time, and are all O. K. so far as examined. They are simply perfection. I can't see how you can furnish such goods at such low prices. I hope you may live long and do well. Yours respectfully, Z. S. WEAVER, Courtney, Tex.

Gents:—I received the "Higginsville Smoker" all O. K. It's a dandy; please find enclosed stamps for another. Yours truly, OTTO ENDERS, Oswegatche, N. Y.

Gentlemen:—I have bought Supplies from nearly all the large manufacturers by the carload, and I must say yours are as good as the best. Indeed, in many lines they are the best. It is a pleasure to handle them. E. T. FLANAGAN, Belleville, Illinois.

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E. T. Flanagan, Belleville, Ill.
E. A. Seeley, Bloomer, Arkansas.
P. J. Thomas, Fredonia, Kans.
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If you need a Carload of Supplies, or only a Bee-Smoker, write to us. Remember, we are here to serve you, and will, if you give us a chance. A Beautiful Catalogue Free.

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49A

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Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked

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Dadant's Foundation in Chicago!

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Send for Price-List,

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13A1f Please mention the Bee Journal.



ONE MAN WITH THE UNION COMBINATION SAW

Can do the work of four men using hand tools, in Rippling, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing, Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery Sold on Trial. Catalogue Free.

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Brood Found., 42c lb.; Section, 50c lb.

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That Queen-Clipping Device Free!

Works Like a Charm.

The Monette Queen-Clipping Device WORKS LIKE A CHARM. With it I have clipped 30 queens, all in one day, when examining my bees. WM. STOLLEY, Grand Island, Nebr.

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I have clipped 19 queens, and must say the Monette Queen-Clipping Device is by far the best invention ever made, and will be welcome to many bee-keepers as it was to me. I could not do without one now.

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GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Forcing the Bees into the Sections.

Query 15.—Which is the most economical and all around the best way to force bees into the sections, etc., viz.: The Heddon divisible brood-chamber method, or by feeding the brood-chamber full of sugar syrup early in the season, or by contraction?—WISCONSIN.

Rev. M. Mahin—Contraction.

Prof. A. J. Cook—The first and third are best.

J. M. Hambaugh—Of this I am not sure. All these methods are practiced.

C. H. Dibbern—I don't know, but I think judicious feeding is the most practicable.

Chas. Dadant & Son—Let the bees go up naturally, by allowing them to breed plentifully.

Mrs. L. Harrison—They need no forcing when honey is abundant. Feeding, if anything.

Dr. C. C. Miller—Neither one is necessary. Put a bait section in the super, if anything is necessary.

W. R. Graham—Get the hive chock-full of bees until there is no room for them in the brood-chamber.

Allen Pringle—Keep out the syrup. Contraction of the brood-chamber, or other methods, as the circumstances may require.

G. M. Doolittle—Use a suitable hive and sections, and the bees will enter them without "force" when there is nectar in the flowers.

W. G. Larrabee—I have never used any of the above methods. A good honey-flow will force them into the sections soon enough for the good of the colony.

R. L. Taylor—If you will have a mixture of black or German blood in your bees, they will need no "forcing"—they will be in the sections when the honey-flow comes.

Eugene Secor—I don't know—I never tried the feeding method. But the contraction method, either by the Heddon plan or otherwise, will put about all the honey in the supers, if you want it there.

B. Taylor—A moderately small hive crammed full of bees, and the supers at least half filled with drawn comb. This ends all doubt about getting the bees into the supers, provided there is any honey in the flowers.

E. France—I don't know. I will tell you what I have done, and it worked well: When the bees were strong, and about to swarm, destroy the queen-cells, and then cage the queen in a section-box in the center of the super.

Dr. J. P. H. Brown—The "best way" depends much upon the character of the colony to be operated on. Strong colonies, and supers placed on early, will do the work in most of cases. With some, the plans you name may work well.

P. H. Elwood—I am inclined to think that expansion of the bees is better than contraction of the bee-hive for forcing bees into sections. As a rule, our colonies in hives containing 8 frames commenced first in the boxes and produced

BUY "DIRECT FROM FACTORY," BEST MIXED PAINTS

At WHOLESALE PRICES, Delivered FREE For Houses, Barns, Roofs, all colors, and SAVE Dealers' profits. In use 5-4 years. Endorsed by Grange & Farmers' Alliance. Low prices will surprise you. Write for Samples. O. W. INGERSOLL, 289 Plymouth St., Brooklyn, N. Y.

12A13 Mention the American Bee Journal.

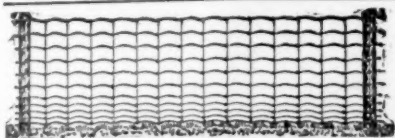
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We have killed high prices. Give me a trial order and be convinced that good Queens can be reared for 50 cts. each. Untested, 50 cts.; Tested, 75 cts. Golden Italians, 3-Banded Italians, and Silver-Gray Carniolans, all the same price. Best of References given.

C. B. BANKSTON,

13A1f CHRISMAN, Burleson Co., TEX.

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ALEXANDER WEPT

For other worlds to conquer. Alex should have changed his name, got a new tin sword and taken another whack at this same old world. That's the way some fence men do, but the **PAGE** conquests cause no weeping on either side and a "return engagement" is always welcome.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

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of refining wax without acid.

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My prices are also the lowest.

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Polished Sections

Equal in finish to any No. 1's. 1 M, \$1.75; 2 M \$3.40; 3 M, \$4.80; 5 M, \$7.50. Or I can furnish a cheaper quality. Also, a full line of

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TEXAS QUEENS.

If you are in need of Queens, let me have your order. Price-List Free.

8A26t J. D. GIVENS, Lisbon, Tex.

Mention the American Bee Journal.

the most honey the past season. Had we contracted these to seven or six frames, they would have swarmed and stored but little honey. A weaker colony can often be forced into boxes by contraction. Feeding syrup at that time is not to be thought of.

Emerson T. Abbott—I would not use the Heddon divisible brood-chamber, feed the brood-chamber full of sugar syrup, nor contract. I would use an ordinary 8-frame hive, put the super on at the proper time, and let the bees have their own way about it.

J. E. Pond—Neither plan would operate in my own locality. Force the bees to fill the top of the frames close up to the top-bar with brood, and there will be no trouble in getting them into the sections. Exact close spacing will do this, or does it with myself.

James A. Stone—I think the best way is by having no more than separators between alternate sections, and then ventilate the upper part of hive, and I have found no trouble in their going to work above as soon as they ought, without neglecting the lower part of the hive.

H. D. Cutting—If your bees are in good spring condition, you will not have to resort to a Heddon brood-chamber. If you fill your brood-chamber with syrup, you will defeat just what you are trying to accomplish; and just at this time contraction is bad, unless you want more swarms.

G. W. Demaree—The best way to induce bees to enter the surplus department of the hive is to put on your surplus cases a little ahead of the honey-flow, then be sure you have plenty of bees to spare from the breeding department, and above all, order a good, rich and deep honey-flow. All the rest is "rot."

Queens and Queen-Rearing.

If you want to know how to have queens fertilized in upper stories while the old queen is still laying below; how you may safely introduce any queen, at any time of the year when bees can fly; all about the different races of bees; all about shipping queens, queen-cages, candy for queen-cages, etc.; all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know—send for Doolittle's "Scientific Queen-Rearing"—a book of over 170 pages, which is as interesting as a story. Here are some good offers of this book:

Bound in cloth, postpaid, \$1.00; or clubbed with the BEE JOURNAL for one year—both for only \$1.75; or given free as a premium for sending us three new subscribers to the BEE JOURNAL for a year at \$1.00 each.

Bee-Keepers' Photograph.—We have now on hand a limited number of excellent photographs of prominent bee-keepers—a number of pictures on one card. The likeness of 49 of them are shown on one of the photographs, and 121 on the other. We will send them, postpaid, for 50 cents each, mailing from the 121 kind first; then after they are all gone, we will send the 49 kind. So those who order first will get the most "faces" for their money. Send orders to the Bee Journal office.

The Bee-Keepers' Guide:

Or Manual of the Apiary,

By PROF. A. J. COOK.

This 15th and latest edition of Prof. Cook's magnificent book of 400 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting new subscribers for the American Bee Journal.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "THE BEE-KEEPER'S GUIDE."

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Send us Two New Subscribers to the Bee Journal (with \$2.00), and we will mail you a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for \$1.25, or we club it with the Bee Journal for a year—both together for only \$1.75. But surely anybody can get only 2 new subscribers to the Bee Journal for a year, and thus get the book as a premium. Let everybody try for it. Will you have one?

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A Bargain—EARLY QUEENS.

119 Colonies Italian Bees in Chaff Hives: two acres land; good house; excellent well.

Early Queens—Tested, \$1.00; Untested, 50c. Sent by return mail.

E. L. CARLINGTON,

16A1f PETTUS, Bee Co., TEX.

Reference—1st National Bank of Beeville.

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CARLOADS



Of Bee-Hives, Sections, Shipping-Cases, Comb Foundation, and Everything used in the Bee-Industry.

I want the name and address of every Bee-Keeper in America. No reason why you cannot do business with me. I have Cheap Lumber and Experienced Workmen; a good Water-Power Factory and know how to run it. I am supplying Dealers as well as consumers. Why not you? Send for Catalogues, Quotations, etc. W. H. PUTNAM, RIVER FALLS, Pierce Co., Wis.

Mention the American Bee Journal.

Page & Lyon Mfg. Co.,

New LONDON, Wis., operates two saw-mills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of bee-keepers' supplies. They have also just completed one of

The Largest Factories,

and have the latest and most improved machinery for the manufacture of Bee-Hives, Sections, etc., that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the clearest and

The Whitest Basswood

is used, and they are polished on both sides. Nearness to pine and basswood forests, and possession of mills and factory equipped with best machinery, all combine to enable this firm to furnish the best goods at

The Lowest Prices. ♥♥

For instance, it has a job lot of 200,000 No. 2 Sections that will be sold at 50 cts. per 1,000; or 2,000 Snow-White Sections will be sold for \$4.00, and larger quantities at still lower prices. Send for Circular and see the prices on a full line of supplies. 16A1f

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Abbott's Space.

Sections as low as the lowest for good goods.
Send for Circular and say what you want.
Special Agent for G. B. Lewis Co.'s goods. Write for prices.
E. T. Abbott, St. Joseph, Mo.

The "St. Joe" stands at the top.
Dovetailed Hives VERY CHEAP.
Dadant's New Process Foundation at
Dadant's prices, WHOLESALE and RETAIL.

SECTIONS CHEAP!

In order to reduce stock we will sell
40,000 $4\frac{1}{4} \times 4\frac{1}{4} \times 2$ 40,000 $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$ 15/16 250,000 $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$
150,000 $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$ 80,000 $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$ 7-to-ft.
Of our No. 2, One-Piece, Open-Top Sections, at the following Low Prices:
1,000 for \$1.00; 3,000 for \$2.50; 5,000 for \$3.75.

These Sections are all of good quality and manufacture, and prices will be maintained for a short time only.

G. B. LEWIS CO., WATERTOWN, WIS.

Be sure to mention the American Bee Journal when you write.

Sweet Clover & Canada.

At the following prices:

5 lbs.	10 lbs.	25 lbs.	50 lbs.
\$1.00	\$1.60	\$3.75	\$7.25.

Also a quantity of Motherwort and Catnip seed. Prices on application.

EGGS for Hatching. Buff Leghorns, Indian Games, & Light Brahmas. Choice Birds. A breeder for 30 years. Prices on application.

JOHN MCARTHUR,

881 Yonge Street, TORONTO, ONT.
15Atf Mention the American Bee Journal.

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—HAS THE BEST—

Italian Queens for Sale

Untested, ready now, 75c. apiece; 6 for \$4.25, or 12 for \$8.00. Tested, \$1.25. Select Tested, best, \$2.00. Pay for Queens on arrival. I guarantee safe arrival and satisfaction.

14A9t

OZAN, ARK.

WHEN ANSWERING THIS ADVERTISEMENT, MENTION THIS JOURNAL.

Honey-Clovers & Buckwheat SEED FOR SALE.

We have made arrangements so that we can furnish seed of several of the Clovers and Japanese Buckwheat, by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Alsike Clover	\$.70	\$1.25	\$3.00	\$5.75
Sweet Clover	.75	1.40	3.25	6.00
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Jap. Buckwheat	.20	.35	.90	1.25

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.
Your orders are solicited.

GEORGE W. YORK & CO.,
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Best on Earth and Cheapest.

Doctor, 3 1/4-in. stove, by mail, \$1.50; Conqueror, 3-in., \$1.10; Large, 2 1/4-in., \$1.10; Little Wonder, 2, wt 10 oz, 60c; Bingham & Hetherington Honey-Knives, 80 cents.

T. F. BINGHAM,
23Dtt Farwell, Mich.

BEGINNERS.

Beginners should have a copy of the Amateur Bee-Keeper, a 70-page book by Prof. J. W. Rouse. Price 25 cents; if sent by mail, 28c. The little book and the Progressive Bee-Keeper (a live, progressive 28-page monthly journal) one year, 65c. Address any first-class dealer, or

LEAHY MFG. CO., Higginsville, Mo.

For Sale HOME, APIARY, —QUEENS.—

1/2 Block of ground, some fruit, GOOD 6-room dwelling, shop, stable, honey-house and poultry-house (over 3,000 square feet of floor), 100 colonies of bees in chaff hives and fully equipped for comb honey, all in town of 1000 population and good alfalfa range and good water. Price, \$3,000. If unsold June 15th, will unqueen, and offer 2 year clipped queens at 25c.; 1 year, unclipped, at 50c. each. July 15th and after, YOUNG queens at 60c. each—all Italian and safe arrival guaranteed. This is a rare bargain, but I must get my wife to a lower altitude. Book your orders at once if you want these queens.

19Atf **R. C. AIKIN, Loveland, Colo.**



Promptness Is What Counts!

Honey-Jars, Shipping-Cases, and everything that bee-keepers use. **Root's Goods at Root's Prices,** and the best shipping point in the country.
Dealer in Honey and Beeswax. Catalogue Free.

Walter S. Ponder
162 Mass. Ave. INDIANAPOLIS, IND.

Mention the American Bee Journal.

Queens for Sale

Italian Queens—after May 15—Untested, 75c. each; 6 for \$4.00; 12 for \$7.20.

Safe arrival and satisfaction guaranteed.

Reference—George W. York & Co. Address,

F. GRABBE,
LIBERTYVILLE, ILL.

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HONEY We have a large amount of Pure No. 1 Alfalfa we will sell cheap.

Wax Wanted.

Boss bee-escape Warranted the best, simplest and quickest Escape on the market. Sent postpaid to any address for 30 cts. It can be returned at our expense if it is not as represented, or we will send the Escape on trial to any bee-keeper wishing to test it in good faith. We are agents for the

Ferguson Patent Hive with double-case Super and Wicket-Gate Honey-Board, with the Escape. It is the easiest, quickest hive to handle for the production of comb honey. Address,

E. S. LOVESY & CO.,
355 6th East St., SALT LAKE CITY, UTAH.
Mention the American Bee Journal. 9Atf

Canada Up-to-date Bee-Supplies

at rock-bottom prices. Send for my annual Circular. A 12-inch Root Fdn. Mill in good order, 2nd hand, at a bargain for either Wax or Cash. Address,

W. A. CHRYSLER, Chatham, Ont.
19A4t Mention the American Bee Journal.

PERSONAL MENTION.

MR. R. MCKNIGHT, we regret to see by the May Review, has lost his wife by death.

MRS. EFFIE BROWN, of Eau Claire, Wis., is the wide-awake editor of the department of "Bees and Honey" in the Northwestern Agriculturist. She makes it very interesting. Knows how.

MR. F. A. SNELL, of Milledgeville, Ill., is one of our oldest readers. In a recent letter he says: "I have all the numbers since 1867 of the 'Old Reliable.' Long may its banner wave. My bees are in good condition."

MR. W. J. FARR, of Los Angeles county, Calif., wrote thus in a letter dated May 14: "You need not fear that California will glut the Eastern market with honey this year, unless from honey held over from last year. I am feeding my 540 colonies at this date. No swarming."

MR. F. L. THOMPSON, of Arvada, Colo., is fast becoming one of the few voluminous writers on apiculture. In the last Bee-Keepers' Review he fathers no less than three different contributions. He is well known to Bee Journal readers also. But probably the two Americans who write the most on the subject of bees are Mr. Doolittle, of New York, and Dr. Miller, of Illinois.

MR. W. T. RICHARDSON, President of the California Bee-Keepers' Exchange, while stepping from a moving train at Santa Paula, on the evening of April 10, was thrown so violently to the ground as to be rendered unconscious for several minutes. His condition has been extremely critical for several days, and at this writing he is not considered wholly out of danger.—Gleanings.

DR. A. B. MASON, of Toledo, Ohio, Secretary of the North American Bee-Keepers' Association, has been suffering with a severe attack of sciatica for nearly four weeks. In a letter he writes, "Don't talk to me about pain—I know him, PERSONALLY, and WELL." We are glad to know Dr. M. is recovering from the attack, and is hard at work on the program and arrangements for the next meeting of the North American, to be held at —(?)— Quite likely it will be Lincoln, Nebr.

REV. EMERSON T. ABBOTT, of St. Joseph, Mo., has written a very interesting article on "Missouri Bee-Keeping: Its Extent, Pleasures, Profits and Possibilities," which was recently published in 50 county papers in Missouri. It was illustrated with seven engravings, and should do much to place bee-keeping in its proper light before Missouri readers. Seems to us others might well follow Mr. Abbott's example. It would help much to get people interested in the product of the hive. And that might aid in creating a larger demand for it. Mr. Abbott has done a good thing for the honey-producers of his State.

Bee-Keeper's Guide—see page 347.

FULL COLONIES

Of Italian Bees for \$4.00. Are worth twice the money. Queens bred from fine imported mother. Langstroth frames: 10-frame hives. All combs built on foundation in wired frames and perfect. Can't possibly break down in shipment. I have been keeping bees as a specialty for many years, and wish to retire from business. A rare chance to get superior colonies cheap. No circular. Send the price and get your bees. See the following from Mr. T. C. Potter, Indianapolis, Ind.:

"April 21st, 1896. Mr. T. H. Kloeer. Dear Sir:—The colony of bees came last evening. It is perfectly satisfactory. In fact, I have bought bees off and on for 15 years, and do not know that I ever have purchased a nicer colony at the time of year, or for such a moderate price. . . . I found the queen readily. The bees were very gentle, not one offering to sting. So I fancy I have a gentle strain—just what I wanted. Now I thank you very much for giving me a good colony for so small a price, and for packing them so that they could be opened up so readily. . . . If any one wants recommendation, refer to me."

Address, **T. H. KLOER,**
426 Willow St., TERRE HAUTE, IND.
20Atf Mention the American Bee Journal.

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The Iowa Policy

Is one that definitely promises to keep an accurate account with you; credit your premiums and interest, charge the actual expense and mortality cost, and hold the remaining funds subject to your order.

Agents Wanted.

JOHN B. KING, GENERAL AGENT,
Suite 513 First Nat'l Bank Bld'g,
20Atf CHICAGO, ILL.
Mention the American Bee Journal.

The Patent Wood-Veneer Foundation.

Bee-keepers should give it a test, and my All-Wax Foundation. I will guarantee there is no better made, as six years ago I discarded the old way of dipping for wax sheets, and a new invention of my own was discovered, which enables me to make the toughest kind of Foundation; also, no acid used to purify the Beeswax, and it preserves the smell of honey, which is more acceptable to the bees. Now is the time to send wax and have it worked up at low prices. Send for Samples and Catalog with low prices. Wax wanted at 31c cash, or 33c trade, delivered.

AUG. WEISS, Hortonville, Wis.
12A13t Please mention the Bee Journal.
Mention the American Bee Journal.

1,000 Teachers' Oxford Bibles

Were bought for spot cash by a Chicago firm from an Eastern publisher who was about to be driven to the wall for the want of ready money. More than a million of these same Bibles, in every way like the illustration, have been sold during the past few years at three times the money we ask for them.



They are the genuine Teachers' Oxford Bibles, Divinity Circuit, round corners, gilt edges, complete teachers' helps, maps, 1,350 pages, bound in French seal. limp, with perfectly flexible backs. Sent prepaid. Regular price, \$4.50; our price, \$2.25. Or we club it with the Bee Journal for one year—both for only \$3.75; or we will give this fine Bible free as a premium to any one sending 4 new subscribers to the Bee Journal one year (with \$4.00). No additional premium is given the new subscribers—simply the Bee Journal one year to each of them.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

of the other, until I lessened the number materially. I then went to feeding them, having a quantity of the "Golden" feeders, thanks to Mr. G. for the description of his feeder, and also the American Bee Journal for the notice of the feeder that I received in it. By the way, the American Bee Journal has been a great help to me.

Well, I got the bees put away for winter by Thanksgiving Day—35 packed out-doors, with the feeder and hive cover combined. Nearly all seemed to winter well, but I lost a number in the spring, of old age and short of stores. Of the 16 in the cellar, some of them with scarcely any honey at all, I fed them all winter once a week, and 15 came out all right, the strongest in numbers of any I have. I am expecting them to commence to swarm soon. The Golden combined feeder and hive-cover is the thing for wintering bees.

It was feared that the combs would get moldy, but I saw only a very little, and that in the bottom of the lower hive where one hive was under the other, with the lower entrance closed.

The prospects now look very encouraging for a honey crop this season. Bees are breeding up fast, and the young bees are out making the air hum. White clover is springing up thick, and everything is very forward for the time of year. There are but a few bees around here. The people will not feed them or read about them. A. F. CROSBY.

Sheffield, Iowa, May 14.

Sweet Harp of Bee-Keeping.

The sweet harp of bee-keeping hangs low on the willow tree. Bees did not, last season, gather honey enough to board themselves in this section of country; consequently, the colonies are few and weak at this time. But the old Bee Journal is not weak, and it is interesting to note therein the ups and downs along the honey line, from Maine to California, and from Washington to Florida; and may it never weaken, but ever grow strong in the sweet cause to which it is devoted. J. L. SEXTON.

Elkhart, Wis., May 19.

Water-Hyacinths for Bees.

A great many bee-keepers are troubled with their bees going into water buckets, troughs for watering stock, and other places, where they are in the way, seeking water, and in the warm, dry weather we all know they consume a great deal. I want to give a plan that will do away with all this annoyance. Take a whisky barrel, saw in two in the center, and locate it in a position to suit, no matter if in the hottest of sun. Fill half full of well-rotted manure or rich soil, then procure some bulbs of the water-hyacinth (*Pontederia grassipes*); place them in the tubs, and fill with water. In three weeks the top of the tubs will be covered with the foliage of the plants, and under the foliage the bees crawl and sip water without let or hindrance, never a bee getting drowned.

The whisky barrel, if sawed down (after being sawed in two), say 6 inches off the top of each would do better, the roots would strike the water sooner. In the absence of the barrel, any good, stout box will do. It is best to start the

plants where you have only two or three bulbs, in a smaller vessel, and transplant to the larger vessel as they grow larger. To keep through the winter, keep the roots always moist. They should be put into a green house and kept moist during the winter, or they can be taken to the cellar, the tub inverted on the ground, and they will come out all right in the spring.

Remember when you put the plants in the water they are planted, the roots will find the soil below in due time, and when the long, full spikes of superlatively beautiful flowers appear, no praise can be too high for them. After they begin blooming you can get half a dozen fine spikes any time you go for them. When the tub gets too full, they must be thinned out, or they will quit blooming. Keep the tub full of water, as it evaporates rapidly. R. P. JOHNSON.

Lee Co., Georgia.

Not a Flattering Outlook.

I put into winter quarters 45 colonies of bees, and I now have 33. They died of starvation mostly. The outlook here for honey this season is not flattering. We will have no white clover, and have had none for two years past. There is less clover in the fields this year than common. The basswood looks as if it would be full of bloom, which will be our only source for honey. All the honey I got last year was from basswood, and that from 25 colonies, in all 200 pounds. If I get that much this season I will feel satisfied. I have bought no supplies this season, as I have enough left over, unless the season is better than I think it will be. I sold my honey at home and realized 16 cents per pound for it. IRA ADAMSON.

Winchester, Ind., May 20.

Hard for Bees to Live.

I have 33 colonies now, the same as I had last year minus one. Bees did not swarm any in 1895. There was a good deal of white clover last year, but bees worked on it scarcely any. There is scarcely any white clover this year. I don't see how the bees will make a living, as we have no basswood and not much clover of any kind.

NOAH THOMAS.

Horatio, Ohio, May 18.

List of Honey and Beeswax Dealers.

Most of whom Quote in this Journal.

Chicago, Ills.

R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

HILDRETH BROS. & SEGELKEN,
120 & 122 West Broadway.

CHAS. ISRAEL & BROS., 486 Canal St.

Kansas City, Mo.

C. C. CLEMOMS & Co., 423 Walnut St.

Buffalo, N. Y.

BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Philadelphia, Pa.

WM. A. SELSER, 10 Vine St.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

BEE-BOOKS

SENT POSTPAID BY

George W. York & Co.,
Chicago, Ills.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains 250 pages, and 245 illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, \$1.00.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture, has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarist's library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages; bound in cloth.

Price, postpaid, \$1.25.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 400 pages; bound in cloth and fully illustrated.

Price, postpaid, \$1.25.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of Queen-Bees are reared in perfect accord with Nature's way. 176 pages, bound in cloth, and illustrated. Price, \$1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopaedia of 400 pages, describing everything pertaining to the care of the honey-bees. It contains 300 engravings. It was written especially for beginners. Bound in cloth. Price, \$1.25.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is too well known to need further description of his book. He is a practical and entertaining writer. You should read his book. 90 pages, bound in paper, and illustrated. Price, 50 cts.

Rational Bee-Keeping, by Dr. John Dzierzon.—This is a translation of his latest German book on bee-culture. It has 350 pages; bound in cloth, \$1.25; in paper covers, \$1.00.

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called **BEEs of HONEY**. 10; paper pamphlet. Price, 40 cents.

Convention Hand-Book, for Bee-Keepers. Thomas G. Newman.—It contains the parliamentary law and rules of order for Bee-Conventions—also Constitution and By-Laws, with subjects for discussion, etc. Cloth, gold-lettered. Price, 25 cts.

Amerikanische Bienenzucht, by Hans Buschbauer.—Printed in German. A hand-book on bee-keeping, giving the methods in use by the best American and German apiarists. Illustrated; 138 pages. Price, \$1.00.

Thirty Years Among the Bees, by Henry Alley.—Gives the results of over a quarter-century's experience in rearing queen-bees. Very latest work of the kind. Nearly 100 pages. Price, 50c.

Why Eat Honey?—This Leaflet is intended for FREE distribution, to create a Local Market. 100 copies, by mail, 40 cts.; 500 for \$1.50; 1000, \$2.50. If 500 or more are ordered at one time, your name and address will be printed on them FREE.

How to Keep Honey and preserve its richness and flavor. Price same as **Why Eat Honey**.

Apiary Register, by Thos. G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, \$1.00; for 100 colonies, \$1.25.

Preparation of Honey for the Market, including the production and care of comb and extracted honey. A chapter from **BEEs and HONEY**. Price, 10 cents.

Bee-Pasturage a Necessity.—This book suggests what and how to plan. It is a chapter from **BEEs and HONEY**. Price, 10 cents.

The Hive I Use, by G. M. Doolittle. It details his management of bees, and methods of producing comb honey. Price, 5 cents.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cts.

Dictionary of Apiculture, by Prof. John Phil. Gives the correct meaning of nearly 500 apicultural terms. Price, 50 cts.

Winter Problem in Bee-Keeping, by G. B. Pierce. Result of 25 years' experience. 50 cts.

Handling Bees, by Chas. Dadant & Son.—A Chapter from Langstroth Revised. Price, 8 cts.

Bee-Keepers' Directory, by H. Alley.—Latest methods in Queen-Rearing, etc. Price, 50c.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. Price, 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 25 cts.

History of Bee-Associations, and Brief Reports of the first 20 conventions. Price, 15 cts.

Honey as Food and Medicine, by T. G. Newman.—A 32-page pamphlet: just the thing to create a demand for honey at home. Should be scattered freely. Contains recipes for Honey-Cakes, Cookies, Puddings, Foam, Wines, and uses of honey for medicine.

Prices, prepaid—Single copy, 5 cts.; 10 copies, 35 cts.; 50 for \$1.50; 100 for \$2.50; 250 for \$5.50; 500 for \$10.00; or 1000 for \$15.00.

When 250 or more are ordered, we will print the bee-keeper's card (free of cost) on the front cover page.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 p.; illustrated. 25c.

Emerson Hinders, made especially for the BEE JOURNAL, are convenient for preserving each number as fast as received. Not available to Canada. Price, 75 cts.

Commercial Calculator, by C. Ropp.—A ready Calculator, Business Arithmetic and Account-Book combined in one. Every farmer and business man should have it. No. 1, bound in water proof leatherette, calf finish. Price, 40 cts. No. 2 in fine artificial leather, with pocket, silicate slate, and account-book. Price, 60 cts.

Green's Four Books, by Chas. A. Green.—Devoted to, 1st, How We Made the Old Farm Pay; 2nd, Peach Culture; 3rd, How to Propagate Fruit-Plants, Vines and Trees; 4th, General Fruit Instructor. Nearly 120 pages. Fully illustrated. 25 cts.

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Kendall's Horse-Book.—35 pictures, showing positions of sick horses, and treats on all their diseases. English or German. Price, 25 cts.

Silo and Silage, by Prof. A. J. Cook.—It gives the method in operation at the Michigan Agricultural College. Price, 25 cts.

Lumber and Log-Book.—Gives measurements of lumber, logs, planks; wages, etc. 25c.

Maple Sugar and the Sugar Bush, by Prof. A. J. Cook.—Full instructions. Price, 35 cts.

Grain Tables, for casting up the price of grain, produce, hay, etc. Price, 25 cts.

Caponizing and Caponizing, by Dr. Sawyer, Fanny Field, and others.—Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 30 cts.

Our Poultry Doctor, or Health in the Poultry Yard and How to Cure Sick Fowls, by Fanny Field.—Everything about Poultry Diseases and their Cure. 64 pages. Price, 30 cts.

Poultry for Market and Poultry for Profit, by Fanny Field.—Tells everything about the Poultry Business. 64 pages. Price, 25 cts.

Turkeys for Market and Turkeys for Profit, by Fanny Field.—All about Turkey-Raising. 64 pages. Price, 25 cts.

Rural Life.—Bees, Poultry, Fruits, Vegetables, and Household Matters. 100 pages. 25 cts.

Strawberry Culture, by T. B. Terry and A. I. Root. For beginners. Price, 40 cts.

Potato Culture, by T. B. Terry.—It tells how to grow them profitably. Price, 40 cts.

Carp Culture, by A. I. Root and Geo. Finley.—Full directions. 70 pages. Price, 40 cts.

Hand-Book of Health, by Dr. Foote.—Hints about eating, drinking, etc. Price, 25 cts.

Alsike Clover Leaflet.—Full directions for growing. 50 for 25 cts.; 100 for 40 cts.; 200, 70c.

Book Clubbing Offers.

(Read Carefully.)

The following clubbing prices include the American Bee Journal one year with each book named. Remember, that only ONE book

can be taken in each case with the Bee Journal a year at the prices named. If more books are wanted, see postpaid prices given with the description of the books on this page. Following is the clubbing-list:

1. Langstroth on the Honey-Bee.....	\$2.00
2. A B C of Bee-Culture.....	2.00
3. Bee-Keepers' Guide.....	1.75
4. Bees and Honey [Cloth bound].....	1.65
5. Scientific Queen-Rearing.....	1.75
6. Dr. Howard's Foul Brood Book.....	1.10
7. Advanced Bee-Culture.....	1.30
8. Amerikanische Bienenzucht [Germ.].....	1.75
9. Bienen-Kultur [German].....	1.25
10. Rational Bee-Keeping [Cloth bound].....	2.00
11. Rational Bee-Keeping [Paper bound].....	1.75
12. Thirty Years Among the Bees.....	1.30
13. Bee-Keeping for Profit.....	1.15
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25. Commercial Calculator, No. 2.....	1.40
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27. Strawberry Culture.....	1.20
28. Potato Culture.....	1.20
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31. Dictionary of Apiculture.....	1.35
32. Maple Sugar and the Sugar Bush.....	1.20
33. Silo and Silage.....	1.10
34. Winter Problem in Bee-Keeping.....	1.30
35. Apiary Register (for 50 colonies).....	1.75
36. Apiary Register (for 100 colonies).....	2.00
37. Bee-Keepers' Directory.....	1.30

Honey & Beeswax Market Quotations.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, and, so far as possible, quotations, are made according to these rules:

FANCY.—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain, or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1 dark," etc.

CHICAGO, ILL., May 19.—We quote: Fancy white, 14@15c.; No. 1, 12@13c.; fancy amber, 9@10c.; No. 1, 8@8½c.; fancy dark, 8@9c.; No. 1, 8c. Extracted, white, 5@7c.; amber, 4@5c.

Beeswax, 28@30c. It continues to sell well and there is no accumulation of shipments. We consider it a good time to sell.

R. A. B. & Co.

PHILADELPHIA, PA., Apr. 22.—We quote: No. 1 white, 9@10c.; fancy amber, 8@9c.; fancy dark, 7@8c. Extracted, white clover, 10c.; amber, 5@5½c.; dark, 4@4½c. Beeswax, 25@26c. Comb honey is dull. Extracted in fair demand. Beeswax lower. W. A. S.

BUFFALO, N. Y., Apr. 20.—We quote: Fancy white, 15@16c.; No. 1 white, 13@14c.; fancy dark, 8@9c.; No. 1 dark, 7@7½c. Beeswax, 25@28c. Trade very dull and honey not moving, except a few fancy lots; anything dark is hard to sell. B. & Co.

CINCINNATI, O., Apr. 22.—There is no fancy white comb honey on our market. Best white sells at 12@14c. in a jobbing way, with a fair demand. Demand is good for extracted at 4@7c., according to quality.

Beeswax is in good demand at 25@30c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, MO., May 20.—We quote: No. 1 white, 13@14c.; No. 1 amber, 10@12c.; No. 1, dark, 8@10c. Extracted, white, 6c.; amber, 5c.; dark, 4c. Beeswax, 22c. C. C. C. & Co.

NEW YORK, N. Y., May 9.—There is some demand for white comb honey at unchanged prices. No market for buckwheat. Extracted remains quiet. New Southern is now arriving and selling at 5@6c. for fine grades and 50@55c. a gallon for fair to common. Beeswax easy at 28@29c. H. B. & S.

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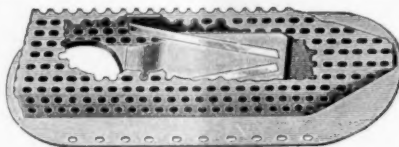
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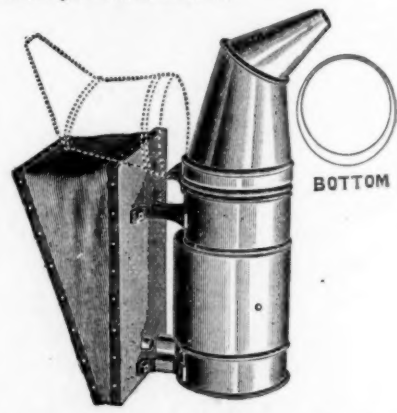
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